

REMARKS

Claims 1-6 are pending in the above-identified application. In the Office Action of January 21, 2004, the Examiner made the following dispositions:

- 1). Rejected Claims 1 and 2 under 35 U.S.C. §112, first paragraph as failing to comply with the written description requirement.
- 2.) Rejected Claims 1-6 under 35 U.S.C. §103(a), as being unpatentable over *Barker* U.S. Patent No. 6,528,033.

Applicants address the Examiner's dispositions below.

1.) Rejection of Claims 1-2

Claims 1 and 2 have been rejected under 35 U.S.C. §112, first paragraph as failing to comply with the written description requirement. Though Applicants do not agree with the Examiner's rejection, Applicants have amended the claims to expedite allowance. Newly amended claim 1 now claims a method for the preparation of a cathode active material comprising:

- (1) mixing, milling and sintering materials for synthesis of a compound represented by the general formula Li_xFePO_4 , where $0 < x \leq 1$, and adding a carbon material at an optional time point in the course of said mixing, milling and sintering;
- (2) employing Li_3PO_4 and $\text{Fe}_3(\text{PO}_4)_2$ or its hydrate $\text{Fe}_3(\text{PO}_4)_2 \cdot n\text{H}_2\text{O}$, where n denotes the number of hydrates, as the materials for synthesis of said Li_xFePO_4 ; and
- (3) setting the oxygen concentration in a sintering atmosphere to greater than or equal to 3ppm, but less than or equal to 1012 ppm in volume at the time point of sintering.

Newly amended claim 2 now claims a method for the preparation of a non-aqueous electrolyte cell including a cathode having a cathode active material, an anode having an anode active material and a non-aqueous electrolyte, wherein

- (1) in preparing said cathode active material, sintering starting materials for synthesis of a compound represented by the general formula Li_xFePO_4 , where $0 < x \leq 1$, are mixed, milled and a carbon material is added at an optional time point in the course of said mixing, milling and sintering;
- (2) Li_3PO_4 and $\text{Fe}_3(\text{PO}_4)_2$ or its hydrate $\text{Fe}_3(\text{PO}_4)_2 \cdot n\text{H}_2\text{O}$, where n denotes the number of hydrates, are used as the starting materials for synthesis of said Li_xFePO_4 ; and
- (3) the oxygen concentration in a sintering atmosphere is set to greater than or equal to 3ppm, but less than or equal to 1012 ppm in volume at the time point of sintering.

No new matter has been added as these amendments are fully supported by the originally filed specification. See page 29 of the specification, Table 1.

Accordingly, Applicants respectfully submit the rejection has been overcome and request that it be withdrawn.

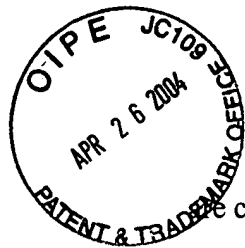
2.) Rejection of Claims 1-6 under 35 U.S.C. §103(a)

Claims 1-6 were rejected under 35 U.S.C. §103(a) as being unpatentable over *Barker*. Applicants respectfully disagree. Claims 1 and 2 have been amended and are clearly unlike *Barker*, which fails to disclose or even suggest a cathode active material where the oxygen concentration is set to a sintering atmosphere to greater than or equal to 3 ppm, but less than or equal to 1012 ppm in volume at the time point of sintering. Referring to *Barker* column 7, *Barker* discloses a method in which the materials are heated only under non-oxidizing conditions. Unlike Applicants' claims 1 and 2, nowhere does *Barker* teach that the oxygen concentration in a sintering atmosphere is set to greater than or equal to 3ppm, but less than or equal to 1012 ppm.

Similarly, amended claim 2 is also clearly unlike *Barker*, which fails to disclose or even suggest a cathode active material where the oxygen concentration is set to a sintering atmosphere to greater than or equal to 3ppm, but less than or equal to 1012 ppm in volume at the time point of sintering. Referring to *Barker* column 7, *Barker* discloses a method in which the materials are heated only under non-oxidizing conditions. Unlike Applicants' claim 2, nowhere does *Barker* teach that the oxygen concentration in a sintering atmosphere is set to greater than or equal to 3ppm, but less than or equal to 1012 ppm.

Accordingly, Applicants respectfully submit that claims 1 and 2 are patentable over the cited art and are allowable. Claims 3-6 depend directly or indirectly from claim 2, and are therefore allowable for at least the same reasons that claim 2 is allowable.

Accordingly, Applicants respectfully submit the objection has been overcome and request that it be withdrawn.



CONCLUSION

In view of the above amendments and remarks, Applicants submit that all claims are clearly allowable over the cited prior art, and respectfully request early and favorable notification to that effect.

Respectfully submitted,

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